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EXAMINER	
RILEY, MARCUS T	

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/725,332	MITSUZAWA, TOYOHIKO	
	Examiner	Art Unit	
	Marcus T. Riley	2625	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *12/02/03*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-13* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-13* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *02 December 2003* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date *attached*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. **Claims 1-7, 9-11 and 13** are rejected under 35 U.S.C. 102(b) as being clearly anticipated by Stemmle (US 5,040,074 hereinafter, Stemmle '074).

Regarding claim 1; Stemmle '074 discloses a recording apparatus comprising: at least two medium supply sections, each of said medium supply sections being provided for supplying a recording medium (*"Input/output scanner 10 is enclosed within cover 12, and optionally includes a copy sheet input tray 16, a document sheet input tray 14..."* column 3, lines 50-52); and at least two recording sections, each of said recording sections being provided in correspondence with one of said medium supply sections and for recording on the recording medium supplied by the corresponding medium supply section (*"Also mounted within scanner 10 is a read/write unit or assembly, generally referred to by reference numberal 30, including*

full-width array image bar 32, lens 34, illumination source or LED array 36, full-width array print bar 38, and marking ink reservoir 40. Read/write assembly 30 is mounted in such a manner so as to position lens 34 and LED array 36 in close proximity to the outer circumferential surface of document feed CVT roll 22, and full-width array print bar 38 in close proximity to the outer circumferential surface of copy sheet CVT roll 20. This assembly scans or reads documents fed via tray 14, the document image areas, as scanned, being converted into electrical image signals representative of each pixel." column 3, lines 57-67 thru column 4, lines 1-3). See also (*"Once again referring to FIG. 1, operation of the scanner is effected by inserting a copy sheet into tray 16 until the sheet frictionally engages CVT roll 20, as caused by forcing the travel of the copy sheet against CVT roll 20 with paper guide 42 and spring 44. After insertion of the copy sheet, the document sheet is loaded in a similar manner into tray 14, until it comes into contact with CVT roll 22, as guided by paper guide 46 and spring 48... Upon entering reading station 62, the document is illuminated by LED array 36, causing light to be reflected from the surface of the document. Reflected light is then captured by lens 34 and conducted to the imaging elements of full-width array image bar 32. The light incident on the imaging elements of image bar 32 is converted into an electrical signal that is subsequently transferred to the appropriate printing element on print bar 38. As reflected from the document surface, a black mark will not cause depletion of charge within the imaging element of image bar 32 and will thereby enable a maximum signal level to be transferred to the corresponding printing element of print bar 38, thereby thus causing the output of a printing mark on the copy sheet."* column 4, lines 21-52).

Regarding claim 2; Stemmle '074 discloses a recording apparatus further comprising: at least two controllers, each of said controllers being provide in one-to-one correspondence with one of said recording sections and for controlling the corresponding recording section (*"Referring once again to FIG. 3, there is shown substrate 31, which functions not only as a mechanical mount for read bar 32 and write bar 38, but also may contain electrical circuitry required for the interconnection of the read and write arrays, 32 and 38 respectively, as well as, control logic chip 92 and optional RAM chip 94. Control logic chip 92 may, in accordance with the present invention, operate in conjunction with RAM 94, to enable the selective alteration or processing of the stored image information received from read array 32. Once altered by the image processing hardware optionally included in control logic chip 92, the image information, as stored in RAM chip 94, would be passed to write array 38. Optional image processing capability of this nature enables enhanced copy output and a wider range of acceptable input documents. Moreover, substrate 31 is integrally fastened to marking ink reservoir 40, as filled through ink refill port 41, and provides through holes 226 of FIG. 6, in which ink from marking ink reservoir 40 can migrate to print bar 38."* column 7, lines 17-36).

Regarding claim 3; Stemmle '074 discloses a recording apparatus further comprising: at least two information generators, each of said information generators being provide in one-to-one correspondence with one of said recording sections and for generating recording information for the corresponding recording section, wherein each said recording section performs recording based on the recording information (*"Referring once again to FIG. 3, there is shown substrate 31, which functions not only as a mechanical mount for read bar 32 and write bar 38, but also*

may contain electrical circuitry required for the interconnection of the read and write arrays, 32 and 38 respectively, as well as, control logic chip 92 and optional RAM chip 94. Control logic chip 92 may, in accordance with the present invention, operate in conjunction with RAM 94, to enable the selective alteration or processing of the stored image information received from read array 32. Once altered by the image processing hardware optionally included in control logic chip 92, the image information, as stored in RAM chip 94, would be passed to write array 38. Optional image processing capability of this nature enables enhanced copy output and a wider range of acceptable input documents. Moreover, substrate 31 is integrally fastened to marking ink reservoir 40, as filled through ink refill port 41, and provides through holes 226 of FIG. 6, in which ink from marking ink reservoir 40 can migrate to print bar 38." column 7, lines 17-36).

Regarding claim 4; Stemmle '074 discloses a recording apparatus wherein said recording sections perform recording on said recording medium supplied from the corresponding medium supply sections in the order in which said recording information is generated by said information generators corresponding to each of said recording sections (*"Referring once again to FIG. 3, there is shown substrate 31, which functions not only as a mechanical mount for read bar 32 and write bar 38, but also may contain electrical circuitry required for the interconnection of the read and write arrays, 32 and 38 respectively, as well as, control logic chip 92 and optional RAM chip 94. Control logic chip 92 may, in accordance with the present invention, operate in conjunction with RAM 94, to enable the selective alteration or processing of the stored image information received from read array 32. Once altered by the image processing hardware optionally included in control logic chip 92, the image information, as*

stored in RAM chip 94, would be passed to write array 38. Optional image processing capability of this nature enables enhanced copy output and a wider range of acceptable input documents. Moreover, substrate 31 is integrally fastened to marking ink reservoir 40, as filled through ink refill port 41, and provides through holes 226 of FIG. 6, in which ink from marking ink reservoir 40 can migrate to print bar 38." column 7, lines 17-36).

Regarding claim 5; Stemmle '074 discloses a recording apparatus wherein each of said recording sections is capable of performing recording in different recording modes (*"Referring once again to FIG. 3, there is shown substrate 31, which functions not only as a mechanical mount for read bar 32 and write bar 38, but also may contain electrical circuitry required for the interconnection of the read and write arrays, 32 and 38 respectively, as well as, control logic chip 92 and optional RAM chip 94. Control logic chip 92 may, in accordance with the present invention, operate in conjunction with RAM 94, to enable the selective alteration or processing of the stored image information received from read array 32. Once altered by the image processing hardware optionally included in control logic chip 92, the image information, as stored in RAM chip 94, would be passed to write array 38. Optional image processing capability of this nature enables enhanced copy output and a wider range of acceptable input documents. Moreover, substrate 31 is integrally fastened to marking ink reservoir 40, as filled through ink refill port 41, and provides through holes 226 of FIG. 6, in which ink from marking ink reservoir 40 can migrate to print bar 38."* column 7, lines 17-36).

Regarding claim 6; Stemmle '074 discloses a recording apparatus wherein each of said medium supply sections comprises a driving section for driving the corresponding medium

supply section (*"Disposed within the input/output scanner are continuous velocity transport (CVT) rolls for copy sheet and document feeding, 20 and 22 respectively, which are driven by a common drive motor and gear assembly (not shown)."* column 3, lines 53-57); and when supplying a recording medium that is arranged across at least two of said medium supply sections, the driving sections of those medium supply sections across which the recording medium is arranged operate together to supply the recording medium (*"This configuration requires dual-ported RAM with a size equal to or greater than twice the number of imaging elements on the read bar, to enable the simultaneous writing of image information, from image bar 32, while reading image information stored from the previous raster to drive the printing elements of print bar 38."* column 5, lines 6-12).

Regarding claim 7; Stemmle '074 discloses a recording apparatus wherein each of said medium supply sections comprises a supply section for supplying the recording medium, and a driving section for driving that supply section (*"Input/output scanner 10 is enclosed within cover 12, and optionally includes a copy sheet input tray 16, a document sheet input tray 14..."* column 3, lines 50-52). See also (*"Disposed within the input/output scanner are continuous velocity transport (CVT) rolls for copy sheet and document feeding, 20 and 22 respectively, which are driven by a common drive motor and gear assembly (not shown)."* column 3, lines 53-57); and when supplying a recording medium that is arranged across the supply sections of at least two of said medium supply sections, the supply sections across which the recording medium is arranged are driven by the driving section for driving one of those supply sections. (*"Disposed within the input/output scanner are continuous velocity transport (CVT) rolls for*

copy sheet and document feeding, 20 and 22 respectively, which are driven by a common drive motor and gear assembly (not shown)." column 3, lines 53-57). See also (*"This configuration requires dual-ported RAM with a size equal to or greater than twice the number of imaging elements on the read bar, to enable the simultaneous writing of image information, from image bar 32, while reading image information stored from the previous raster to drive the printing elements of print bar 38.*" column 5, lines 6-12).

Regarding claim 9; Stemmle '074 discloses a recording apparatus according to claim 1 wherein: each of said recording sections has a recording portion row in which a plurality of recording portions are arranged in a row with equal pitch in a supply direction in which the recording medium is supplied (*"Further included in assembly 30 are a plurality of print arrays 210 of FIG. 6, also mounted upon substrate 31, which together comprise print bar 38. Referring now to FIG. 6, which is an isometric view of the front face 229 of print array 210, showing an array of droplet emitting nozzles 227. The upper electrically insulating substrate 228 has heating elements (not shown) and addressable electrodes (not shown) patterned on the lower surface thereof, while the lower substrate or channel plate 231 has parallel grooves (not shown) which extend in one direction and penetrate through the upper substrate front face edge 229. The other end of the grooves terminate in the interior of channel plate 231 after intersecting through recess 225, which is used as the ink supply manifold or reservoir for the capillary filled ink channels formed by the parallel grooves, and are directly connected to marking ink reservoir 40 of FIG. 3, by through holes 226 in substrate 31.*" column 6, lines 18-35); and as for two said recording sections that are arranged next to each other in a direction orthogonal to said supply direction, a distance between the rearmost recording portion, in said supply direction, of the recording

portion row of one of the two recording sections and the foremost recording portion, in said supply direction, of the recording portion row of the other of the two recording sections is equal to said pitch (*"Further included in assembly 30 are a plurality of print arrays 210 of FIG. 6, also mounted upon substrate 31, which together comprise print bar 38. Referring now to FIG. 6, which is an isometric view of the front face 229 of print array 210, showing an array of droplet emitting nozzles 227. The upper electrically insulating substrate 228 has heating elements (not shown) and addressable electrodes (not shown) patterned on the lower surface thereof, while the lower substrate or channel plate 231 has parallel grooves (not shown) which extend in one direction and penetrate through the upper substrate front face edge 229. The other end of the grooves terminate in the interior of channel plate 231 after intersecting through recess 225, which is used as the ink supply manifold or reservoir for the capillary filled ink channels formed by the parallel grooves, and are directly connected to marking ink reservoir 40 of FIG. 3, by through holes 226 in substrate 31. The surface of channel plate 231 with the grooves, is aligned and bonded to the heater plate 228, so that a respective one of the plurality of heating elements is positioned in each channel formed by the grooves and the upper substrate or heater plate 228. Ink enters the manifold formed by recess 225 and the upper substrate 288 through inlets 226 and, by capillary action, fills the associated channels by flowing through one or more recesses (not shown) patterned in the insulative layer 218 of heater plate 228. The ink at each nozzle 227, forms a meniscus, the surface tension of which prevents the ink from weeping therefrom. The addressing electrodes 233 on the upper substrate or channel plate 228 terminate at terminals 232. The lower substrate or channel plate 231 is smaller than that of the upper substrate in order that the electrode terminals 232 are exposed and available for wire bonding to electrodes on*

substrate 31, on which printhead 210 is permanently mounted. Layer 218 is a thick film passivation layer, sandwiched between upper and lower substrates, patterned to expose the heating elements (not shown), thus placing them in a cavity, and also patterned to form a single elongated recess or a linear series of recesses to enable ink flow between the manifold 225 and the associated ink channels. In addition, the thick film insulative layer 218 is patterned to expose the electrode terminals 232." column 6, lines 18-62).

Regarding claim 10; Stemmle '074 discloses a recording apparatus comprising: at least two medium supply sections, each of said medium supply sections being provided for supplying a recording medium (*"Input/output scanner 10 is enclosed within cover 12, and optionally includes a copy sheet input tray 16, a document sheet input tray 14..."* column 3, lines 50-52); at least two recording sections, each of said recording sections being provided in correspondence with one of said medium supply sections and for recording on the recording medium supplied by the corresponding medium supply section (*"Also mounted within scanner 10 is a read/write unit or assembly, generally referred to by reference numberal 30, including full-width array image bar 32, lens 34, illumination source or LED array 36, full-width array print bar 38, and marking ink reservoir 40. Read/write assembly 30 is mounted in such a manner so as to position lens 34 and LED array 36 in close proximity to the outer circumferential surface of document feed CVT roll 22, and full-width array print bar 38 in close proximity to the outer circumferential surface of copy sheet CVT roll 20. This assembly scans or reads documents fed via tray 14, the document image areas, as scanned, being converted into electrical image signals representative of each pixel."* column 3, lines 57-67 thru column 4, lines 1-3). See also (*"Once again referring to FIG. 1, operation of the scanner is effected by inserting a copy sheet into tray 16 until the sheet*

frictionally engages CVT roll 20, as caused by forcing the travel of the copy sheet against CVT roll 20 with paper guide 42 and spring 44. After insertion of the copy sheet, the document sheet is loaded in a similar manner into tray 14, until it comes into contact with CVT roll 22, as guided by paper guide 46 and spring 48... Upon entering reading station 62, the document is illuminated by LED array 36, causing light to be reflected from the surface of the document. Reflected light is then captured by lens 34 and conducted to the imaging elements of full-width array image bar 32. The light incident on the imaging elements of image bar 32 is converted into an electrical signal that is subsequently transferred to the appropriate printing element on print bar 38. As reflected from the document surface, a black mark will not cause depletion of charge within the imaging element of image bar 32 and will thereby enable a maximum signal level to be transferred to the corresponding printing element of print bar 38, thereby thus causing the output of a printing mark on the copy sheet." column 4, lines 21-52); at least two controllers, each of said controllers being provide in one-to-one correspondence with one of said recording sections and for controlling the corresponding recording section (*"Referring once again to FIG. 3, there is shown substrate 31, which functions not only as a mechanical mount for read bar 32 and write bar 38, but also may contain electrical circuitry required for the interconnection of the read and write arrays, 32 and 38 respectively, as well as, control logic chip 92 and optional RAM chip 94. Control logic chip 92 may, in accordance with the present invention, operate in conjunction with RAM 94, to enable the selective alteration or processing of the stored image information received from read array 32. Once altered by the image processing hardware optionally included in control logic chip 92, the image information, as stored in RAM chip 94, would be passed to write array 38. Optional image processing capability of this nature enables*

enhanced copy output and a wider range of acceptable input documents. Moreover, substrate 31 is integrally fastened to marking ink reservoir 40, as filled through ink refill port 41, and provides through holes 226 of FIG. 6, in which ink from marking ink reservoir 40 can migrate to print bar 38." column 7, lines 17-36); and at least two information generators, each of said information generators being provide in one-to-one correspondence with one of said recording sections and for generating recording information for the corresponding recording section, wherein each said recording section performs recording based on the recording information (*"Referring once again to FIG. 3, there is shown substrate 31, which functions not only as a mechanical mount for read bar 32 and write bar 38, but also may contain electrical circuitry required for the interconnection of the read and write arrays, 32 and 38 respectively, as well as, control logic chip 92 and optional RAM chip 94. Control logic chip 92 may, in accordance with the present invention, operate in conjunction with RAM 94, to enable the selective alteration or processing of the stored image information received from read array 32. Once altered by the image processing hardware optionally included in control logic chip 92, the image information, as stored in RAM chip 94, would be passed to write array 38. Optional image processing capability of this nature enables enhanced copy output and a wider range of acceptable input documents. Moreover, substrate 31 is integrally fastened to marking ink reservoir 40, as filled through ink refill port 41, and provides through holes 226 of FIG. 6, in which ink from marking ink reservoir 40 can migrate to print bar 38."* column 7, lines 17-36); wherein said recording sections perform recording on said recording medium supplied from the corresponding medium supply sections in the order in which said recording information is generated by said information generators corresponding to each of said recording sections (*"Referring once again to FIG. 3,*

there is shown substrate 31, which functions not only as a mechanical mount for read bar 32 and write bar 38, but also may contain electrical circuitry required for the interconnection of the read and write arrays, 32 and 38 respectively, as well as, control logic chip 92 and optional RAM chip 94. Control logic chip 92 may, in accordance with the present invention, operate in conjunction with RAM 94, to enable the selective alteration or processing of the stored image information received from read array 32. Once altered by the image processing hardware optionally included in control logic chip 92, the image information, as stored in RAM chip 94, would be passed to write array 38. Optional image processing capability of this nature enables enhanced copy output and a wider range of acceptable input documents. Moreover, substrate 31 is integrally fastened to marking ink reservoir 40, as filled through ink refill port 41, and provides through holes 226 of FIG. 6, in which ink from marking ink reservoir 40 can migrate to print bar 38." column 7, lines 17-36); wherein each of said recording sections is capable of performing recording in different recording modes (*"Referring once again to FIG. 3, there is shown substrate 31, which functions not only as a mechanical mount for read bar 32 and write bar 38, but also may contain electrical circuitry required for the interconnection of the read and write arrays, 32 and 38 respectively, as well as, control logic chip 92 and optional RAM chip 94. Control logic chip 92 may, in accordance with the present invention, operate in conjunction with RAM 94, to enable the selective alteration or processing of the stored image information received from read array 32. Once altered by the image processing hardware optionally included in control logic chip 92, the image information, as stored in RAM chip 94, would be passed to write array 38. Optional image processing capability of this nature enables enhanced copy output and a wider range of acceptable input documents. Moreover, substrate 31 is*

integrally fastened to marking ink reservoir 40, as filled through ink refill port 41, and provides through holes 226 of FIG. 6, in which ink from marking ink reservoir 40 can migrate to print bar 38." column 7, lines 17-36); wherein each of said medium supply sections comprises a driving section for driving the corresponding medium supply section (*"Disposed within the input/output scanner are continuous velocity transport (CVT) rolls for copy sheet and document feeding, 20 and 22 respectively, which are driven by a common drive motor and gear assembly (not shown)."* column 3, lines 53-57); wherein, when supplying a recording medium that is arranged across at least two of said medium supply sections the driving sections of those medium supply sections across which the recording medium is arranged operate together to supply the recording medium (*"This configuration requires dual-ported RAM with a size equal to or greater than twice the number of imaging elements on the read bar, to enable the simultaneous writing of image information, from image bar 32, while reading image information stored from the previous raster to drive the printing elements of print bar 38."* column 5, lines 6-12); wherein each of said recording sections has a recording portion row in which a plurality of recording portions are arranged in a row with equal pitch in a supply direction in which the recording medium is supplied (*"Further included in assembly 30 are a plurality of print arrays 210 of FIG. 6, also mounted upon substrate 31, which together comprise print bar 38. Referring now to FIG. 6, which is an isometric view of the front face 229 of print array 210, showing an array of droplet emitting nozzles 227. The upper electrically insulating substrate 228 has heating elements (not shown) and addressable electrodes (not shown) patterned on the lower surface thereof, while the lower substrate or channel plate 231 has parallel grooves (not shown) which extend in one direction and penetrate through the upper substrate front face edge 229. The other*

end of the grooves terminate in the interior of channel plate 231 after intersecting through recess 225, which is used as the ink supply manifold or reservoir for the capillary filled ink channels formed by the parallel grooves, and are directly connected to marking ink reservoir 40 of FIG. 3, by through holes 226 in substrate 31." column 6, lines 18-35); and wherein, as for two said recording sections that are arranged next to each other in a direction orthogonal to said supply direction, a distance between the rearmost recording portion, in said supply direction, of the recording portion row of one of the two recording sections and the foremost recording portion, in said supply direction, of the recording portion row of the other of the two recording sections is equal to said pitch (*"Further included in assembly 30 are a plurality of print arrays 210 of FIG. 6, also mounted upon substrate 31, which together comprise print bar 38. Referring now to FIG. 6, which is an isometric view of the front face 229 of print array 210, showing an array of droplet emitting nozzles 227. The upper electrically insulating substrate 228 has heating elements (not shown) and addressable electrodes (not shown) patterned on the lower surface thereof, while the lower substrate or channel plate 231 has parallel grooves (not shown) which extend in one direction and penetrate through the upper substrate front face edge 229. The other end of the grooves terminate in the interior of channel plate 231 after intersecting through recess 225, which is used as the ink supply manifold or reservoir for the capillary filled ink channels formed by the parallel grooves, and are directly connected to marking ink reservoir 40 of FIG. 3, by through holes 226 in substrate 31. The surface of channel plate 231 with the grooves, is aligned and bonded to the heater plate 228, so that a respective one of the plurality of heating elements is positioned in each channel formed by the grooves and the upper substrate or heater plate 228. Ink enters the manifold formed by recess 225 and the upper substrate 288 through*

inlets 226 and, by capillary action, fills the associated channels by flowing through one or more recesses (not shown) patterned in the insulative layer 218 of heater plate 228. The ink at each nozzle 227, forms a meniscus, the surface tension of which prevents the ink from weeping therefrom. The addressing electrodes 233 on the upper substrate or channel plate 228 terminate at terminals 232. The lower substrate or channel plate 231 is smaller than that of the upper substrate in order that the electrode terminals 232 are exposed and available for wire bonding to electrodes on substrate 31, on which printhead 210 is permanently mounted. Layer 218 is a thick film passivation layer, sandwiched between upper and lower substrates, patterned to expose the heating elements (not shown), thus placing them in a cavity, and also patterned to form a single elongated recess or a linear series of recesses to enable ink flow between the manifold 225 and the associated ink channels. In addition, the thick film insulative layer 218 is patterned to expose the electrode terminals 232." column 6, lines 18-62).

Regarding claim 11; Stemmle '074 discloses a computer-readable storage medium having recorded thereon a computer program for a recording apparatus comprising: at least two medium supply sections, each of said medium supply sections being provided for supplying a recording medium (*"Input/output scanner 10 is enclosed within cover 12, and optionally includes a copy sheet input tray 16, a document sheet input tray 14..."* column 3, lines 50-52); and at least two recording sections, each of said recording sections being provided in correspondence with one of said medium supply sections and for recording on the recording medium supplied by the corresponding medium supply section (*"Also mounted within scanner 10 is a read/write unit or assembly, generally referred to by reference numberal 30, including full-width array image bar 32, lens 34, illumination source or LED array 36, full-width array*

print bar 38, and marking ink reservoir 40. Read/write assembly 30 is mounted in such a manner so as to position lens 34 and LED array 36 in close proximity to the outer circumferential surface of document feed CVT roll 22, and full-width array print bar 38 in close proximity to the outer circumferential surface of copy sheet CVT roll 20. This assembly scans or reads documents fed via tray 14, the document image areas, as scanned, being converted into electrical image signals representative of each pixel." column 3, lines 57-67 thru column 4, lines 1-3). See also (*"Once again referring to FIG. 1, operation of the scanner is effected by inserting a copy sheet into tray 16 until the sheet frictionally engages CVT roll 20, as caused by forcing the travel of the copy sheet against CVT roll 20 with paper guide 42 and spring 44. After insertion of the copy sheet, the document sheet is loaded in a similar manner into tray 14, until it comes into contact with CVT roll 22, as guided by paper guide 46 and spring 48... Upon entering reading station 62, the document is illuminated by LED array 36, causing light to be reflected from the surface of the document. Reflected light is then captured by lens 34 and conducted to the imaging elements of full-width array image bar 32. The light incident on the imaging elements of image bar 32 is converted into an electrical signal that is subsequently transferred to the appropriate printing element on print bar 38. As reflected from the document surface, a black mark will not cause depletion of charge within the imaging element of image bar 32 and will thereby enable a maximum signal level to be transferred to the corresponding printing element of print bar 38, thereby thus causing the output of a printing mark on the copy sheet."* column 4, lines 21-52); the computer program causing said recording apparatus to realizing a function of making each of said recording sections record on said recording medium supplied from each of the corresponding medium supply sections (*"Referring once again to FIG. 3, there is shown*

substrate 31, which functions not only as a mechanical mount for read bar 32 and write bar 38, but also may contain electrical circuitry required for the interconnection of the read and write arrays, 32 and 38 respectively, as well as, control logic chip 92 and optional RAM chip 94. Control logic chip 92 may, in accordance with the present invention, operate in conjunction with RAM 94, to enable the selective alteration or processing of the stored image information received from read array 32. Once altered by the image processing hardware optionally included in control logic chip 92, the image information, as stored in RAM chip 94, would be passed to write array 38. Optional image processing capability of this nature enables enhanced copy output and a wider range of acceptable input documents. Moreover, substrate 31 is integrally fastened to marking ink reservoir 40, as filled through ink refill port 41, and provides through holes 226 of FIG. 6, in which ink from marking ink reservoir 40 can migrate to print bar 38." column 7, lines 17-36).

Regarding claim 13; Stemmle '074 discloses a method for performing recording with a recording apparatus including: at least two medium supply sections, each of said medium supply sections being provided for supplying a recording medium (*"Input/output scanner 10 is enclosed within cover 12, and optionally includes a copy sheet input tray 16, a document sheet input tray 14..."* column 3, lines 50-52); and at least two recording sections, each of said recording sections being provided in correspondence with one of said medium supply sections and for recording on the recording medium supplied by the corresponding medium supply section, the method comprising (*"Also mounted within scanner 10 is a read/write unit or assembly, generally referred to by reference numberal 30, including full-width array image bar 32, lens 34, illumination source or LED array 36, full-width array print bar 38, and marking ink reservoir*

40. Read/write assembly 30 is mounted in such a manner so as to position lens 34 and LED array 36 in close proximity to the outer circumferential surface of document feed CVT roll 22, and full-width array print bar 38 in close proximity to the outer circumferential surface of copy sheet CVT roll 20. This assembly scans or reads documents fed via tray 14, the document image areas, as scanned, being converted into electrical image signals representative of each pixel." column 3, lines 57-67 thru column 4, lines 1-3). See also (*"Once again referring to FIG. 1, operation of the scanner is effected by inserting a copy sheet into tray 16 until the sheet frictionally engages CVT roll 20, as caused by forcing the travel of the copy sheet against CVT roll 20 with paper guide 42 and spring 44. After insertion of the copy sheet, the document sheet is loaded in a similar manner into tray 14, until it comes into contact with CVT roll 22, as guided by paper guide 46 and spring 48... Upon entering reading station 62, the document is illuminated by LED array 36, causing light to be reflected from the surface of the document. Reflected light is then captured by lens 34 and conducted to the imaging elements of full-width array image bar 32. The light incident on the imaging elements of image bar 32 is converted into an electrical signal that is subsequently transferred to the appropriate printing element on print bar 38. As reflected from the document surface, a black mark will not cause depletion of charge within the imaging element of image bar 32 and will thereby enable a maximum signal level to be transferred to the corresponding printing element of print bar 38, thereby thus causing the output of a printing mark on the copy sheet."* column 4, lines 21-52): a step of supplying said recording medium to said recording sections from the corresponding medium supply sections (*"Input/output scanner 10 is enclosed within cover 12, and optionally includes a copy sheet input tray 16, a document sheet input tray 14..."* column 3, lines 50-52). See also (*"Disposed*

within the input/output scanner are continuous velocity transport (CVT) rolls for copy sheet and document feeding, 20 and 22 respectively, which are driven by a common drive motor and gear assembly (not shown)." column 3, lines 53-57); and a step of recording with those recording sections on the supplied recording medium (*"Disposed within the input/output scanner are continuous velocity transport (CVT) rolls for copy sheet and document feeding, 20 and 22 respectively, which are driven by a common drive motor and gear assembly (not shown)."* column 3, lines 53-57). See also (*"This configuration requires dual-ported RAM with a size equal to or greater than twice the number of imaging elements on the read bar, to enable the simultaneous writing of image information, from image bar 32, while reading image information stored from the previous raster to drive the printing elements of print bar 38."* column 5, lines 6-12).

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

4. **Claim 8** is rejected under 35 U.S.C. 103(a) as being unpatentable over Stemmle '074 in combination with Botten et al. (US 2003/0098984 A1 hereinafter, Botten '984).

Regarding claim 8; Stemmle '074 discloses a recording apparatus comprising: at least two medium supply sections, each of said medium supply sections being provided for supplying a recording medium (*"Input/output scanner 10 is enclosed within cover 12, and optionally includes a copy sheet input tray 16, a document sheet input tray 14..."* column 3, lines 50-52);

and at least two recording sections, each of said recording sections being provided in correspondence with one of said medium supply sections and for recording on the recording medium supplied by the corresponding medium supply section (*"Also mounted within scanner 10 is a read/write unit or assembly, generally referred to by reference numberal 30, including full-width array image bar 32, lens 34, illumination source or LED array 36, full-width array print bar 38, and marking ink reservoir 40. Read/write assembly 30 is mounted in such a manner so as to position lens 34 and LED array 36 in close proximity to the outer circumferential surface of document feed CVT roll 22, and full-width array print bar 38 in close proximity to the outer circumferential surface of copy sheet CVT roll 20. This assembly scans or reads documents fed via tray 14, the document image areas, as scanned, being converted into electrical image signals representative of each pixel."* column 3, lines 57-67 thru column 4, lines 1-3). See also (*"Once again referring to FIG. 1, operation of the scanner is effected by inserting a copy sheet into tray 16 until the sheet frictionally engages CVT roll 20, as caused by forcing the travel of the copy sheet against CVT roll 20 with paper guide 42 and spring 44. After insertion of the copy sheet, the document sheet is loaded in a similar manner into tray 14, until it comes into contact with CVT roll 22, as guided by paper guide 46 and spring 48... Upon entering reading station 62, the document is illuminated by LED array 36, causing light to be reflected from the surface of the document. Reflected light is then captured by lens 34 and conducted to the imaging elements of full-width array image bar 32. The light incident on the imaging elements of image bar 32 is converted into an electrical signal that is subsequently transferred to the appropriate printing element on print bar 38. As reflected from the document surface, a black mark will not cause depletion of charge within the imaging element of image bar 32 and will thereby enable a*

maximum signal level to be transferred to the corresponding printing element of print bar 38, thereby thus causing the output of a printing mark on the copy sheet." column 4, lines 21-52).

Stemmle '074 does not expressly disclose a recording apparatus wherein each of said medium supply sections comprises a driving force blocking section that blocks a transmission path for transmitting driving force caused by said driving sections; and when supplying a recording medium with one of the supply sections across which the recording medium is arranged, the driving force blocking section of the medium supply section including the other supply section blocks the transmission path for transmitting the driving force caused by the driving section of that medium supply section.

Botten '984 discloses a recording apparatus according to claim 7 wherein: each of said medium supply sections comprises a driving force blocking section that blocks a transmission path for transmitting driving force caused by said driving sections (*"A platen gear 82 may be moved inward or outward by an arm 84 to form a clutch mechanism for applying and removing torque to the platen shaft 54 (FIG. 6). This clutch mechanism receives torque from the capstan gear 86 to rotate the platen roller 76. The capstan drive 80 also engages a compliant belt drive 90 for transferring torque to output kickers after the media passes the print station to be dispense into an output tray 113 (FIG. 22)."* page 4, paragraph 0065); and when supplying a recording medium with one of the supply sections across which the recording medium is arranged, the driving force blocking section of the medium supply section including the other supply section blocks the transmission path for transmitting the driving force caused by the driving section of that medium supply section (*"This may be accomplished by engaging the platen roller 76 with the clutch members 82 and 84 to pull the leading edge past the printhead 151 until the pinch and*

capstan rollers can grab the leading edge to commence translating the media sheet. After the border of the leading edge is blackened by the printhead 151, the clutch members 82 and 84 disengage the platen roller 76 from the capstan drive 80 to allow the capstan and pinch rollers 79 and 77 to pull the media sheet through the print station for transferring the desired image portion to the sheet. While transferring the desired image portion between the borders at the lending and trailing edges, the printhead 151 may also blacken the borders at the side edges. After the desired image portion is transferred to the media sheet, the platen roller 76 capstan and pinch roller may pull the trailing edge of the media sheet past the printhead 151 to be blackened." page 8, paragraph 0106).

Stemmle '074 and Botten '984 are combinable because they are from same field of endeavor of printer systems (*"Embodiments of the present invention are directed to printing systems."* Botten '984 page 1, paragraph 0002).

At the time of the invention, it would have been obvious to a person of ordinary skill in the art to modify the printer system as taught by Stemmle '074 by adding a recording apparatus wherein each of said medium supply sections comprises a driving force blocking section that blocks a transmission path for transmitting driving force caused by said driving sections; and when supplying a recording medium with one of the supply sections across which the recording medium is arranged, the driving force blocking section of the medium supply section including the other supply section blocks the transmission path for transmitting the driving force caused by the driving section of that medium supply section as taught by Botten '984.

The motivation for doing so would have been because it advantageous to eliminate the need for multiple printers for performing different types of image transfer processes (*"It is yet another object of an embodiment of the present invention to eliminate the need for multiple printers for performing different types of image transfer processes."* Botten '984 at page 1, paragraph 0010).

Therefore, it would have been obvious to combine Stemmle '074 with Botten '984 to obtain the invention as specified in claim 1.

5. **Claim 12** is rejected under 35 U.S.C. 103(a) as being unpatentable over Stemmle '074 in combination with Botten et al. (US 2003/0098984 A1 hereinafter, Botten '984).

Regarding claim 12; Stemmle '074 discloses at least two medium supply sections, each of said medium supply sections being provided for supplying a recording medium (*"Input/output scanner 10 is enclosed within cover 12, and optionally includes a copy sheet input tray 16, a document sheet input tray 14..."* column 3, lines 50-52); discloses a and at least two recording sections, each of said recording sections being provided in correspondence with one of said medium supply sections and for recording on the recording medium supplied by the corresponding medium supply section (*"Also mounted within scanner 10 is a read/write unit or assembly, generally referred to by reference numberal 30, including full-width array image bar 32, lens 34, illumination source or LED array 36, full-width array print bar 38, and marking ink reservoir 40. Read/write assembly 30 is mounted in such a manner so as to position lens 34 and LED array 36 in close proximity to the outer circumferential surface of document feed CVT roll 22, and full-width array print bar 38 in close proximity to the outer circumferential surface of copy sheet CVT roll 20. This assembly scans or reads documents fed via tray 14, the document*

image areas, as scanned, being converted into electrical image signals representative of each pixel." column 3, lines 57-67 thru column 4, lines 1-3). See also (*"Once again referring to FIG. 1, operation of the scanner is effected by inserting a copy sheet into tray 16 until the sheet frictionally engages CVT roll 20, as caused by forcing the travel of the copy sheet against CVT roll 20 with paper guide 42 and spring 44. After insertion of the copy sheet, the document sheet is loaded in a similar manner into tray 14, until it comes into contact with CVT roll 22, as guided by paper guide 46 and spring 48... Upon entering reading station 62, the document is illuminated by LED array 36, causing light to be reflected from the surface of the document. Reflected light is then captured by lens 34 and conducted to the imaging elements of full-width array image bar 32. The light incident on the imaging elements of image bar 32 is converted into an electrical signal that is subsequently transferred to the appropriate printing element on print bar 38. As reflected from the document surface, a black mark will not cause depletion of charge within the imaging element of image bar 32 and will thereby enable a maximum signal level to be transferred to the corresponding printing element of print bar 38, thereby thus causing the output of a printing mark on the copy sheet."* column 4, lines 21-52).

Stemmle '074 does not expressly disclose a computer system comprising: a computer, and a recording apparatus connected to said computer.

Kuriyama '634 discloses a computer, and a recording apparatus connected to said computer (*"Referring to this Figure, a laser beam printer main part 1500 stores printing information and other information supplied from an external host computer, and forms a bit map image in accordance with such information so as to print an image on a recording paper which is used as the recording medium."* column 25, lines 14-19).

Stemmle '074 and Kuriyama '634 are combinable because they are from same field of endeavor of printer systems (*"The reading and recording apparatus 500 is connected to an ink-jet printer 510 by means of a connector provided in a rear portion of the apparatus. The printer 510 prints out the image."* Kuriyama '634 at column 1, lines 49-52).

At the time of the invention, it would have been obvious to a person of ordinary skill in the art to modify the printer system as taught by Stemmle '074 by adding a computer, and a recording apparatus connected to said computer as taught by Kuriyama '634.

The motivation for doing so would have been because it advantageous to provide an output apparatus in which the sheet convey paths of a scanner section and a printer section join and output means and reader means are arranged downstream and upstream, respectively, from the joining point (*"An object of the present invention is to solve the above-mentioned problems of the conventional art by providing an output apparatus in which the sheet convey paths of a scanner section and a printer section join and output means and reader means are arranged downstream and upstream, respectively, from the joining point."* Kuriyama '634 at column 5, lines 1-2).

Therefore, it would have been obvious to combine Stemmle '074 with Kuriyama '634 to obtain the invention as specified in claim 12.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Marcus T. Riley whose telephone number is 571-270-1581. The examiner can normally be reached on Monday - Friday, 7:30-5:00, est.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Twyler Lamb can be reached on 571-272-7406. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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